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FORM PTO-139E  
(REV 11-98)

U.S. DEPARTMENT OF COMMERCE AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371

RD-25712

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

09/319406

INTERNATIONAL APPLICATION NO.

PCT/US98/19021

INTERNATIONAL FILING DATE

14 SEPTEMBER 1998

PRIORITY DATE CLAIMED

12 SEPTEMBER 1997

TITLE OF INVENTION

METHOD AND APPARATUS FOR PRODUCING DIRECTIONALLY SOLIDIFIED CASTINGS

APPLICANT(S) FOR DO/EO/US

Vegeny Nikolaevich KABLOV, Viktor Vladimirovich GERASIMOV, Joseph Markovich DEMONIS, Viatcheslav Alexeevitch NIKOLAEV and Elena Mikhailovna VISIK

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371 (f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 37 (b) and PCT Articles 22 and 39 (1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19<sup>th</sup> month from the earliest claimed priority date
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☒ has been transmitted by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371 (c) (2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c) (3))
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c) (3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c) (4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c) (5)).

Items 11. To 16. Below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.  
☐ A **SECOND OR SUBSEQUENT** preliminary amendment
14. ☐ A substitute specification.
15. ☐ A Change of power of attorney and/or address letter.
16. ☒ Other items or information:  
Item 9: a signed Combined Declaration and Power of Attorney will be submitted when available; Petition Under 37 CFR 137(b); translation of priority application RU 97115515

Express Mail No. EJ870850479USDate of Deposit: June 14 1999

I hereby certify that the application is being deposited with the United States Postal Service under 37CFR 1.10 on the date indicated above and is addressed to the Commissioner Patents and Trademarks, Washington D.C. 20231.

Dolores Tillson  
Printed NameDolores Tillson  
Signature

PCT/US98/19021

RD-25712

17. ☒ The following fees are submitted:**BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):**

Neither international preliminary examination fee (37 CFR 1.482)  
nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO  
and International Search Report not prepared by the EPO or JPO \$970.00

International preliminary examination fee (37 CFR 1.482) not paid to  
USPTO but International Search Report prepared by the EPO or JPO \$840.00

International preliminary examination fee (37 CFR 1.482) nor paid to USPTO  
but international search fee (37 CFR 1.445 (a) (2)) paid to USPTO \$760.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)  
but all claims did not satisfy provisions of PCT Article 33(1) - (4) \$670.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)  
and all claims satisfied provisions of PCT Article 33(1)-(4) \$96.00

**ENTER APPROPRIATE BASIC FEE AMOUNT =**

CALCULATIONS PTO USE ONLY

\$ 840.00

Surcharge of \$130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30  
months from the earliest claimed priority date (37 CFR 1.492 (e)). \$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	14	- 20 =	0	x \$18.00 \$
Independent claims	2	- 3 =	0	x \$78.00 \$
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			- \$260.00	\$

**TOTAL OF ABOVE CALCULATIONS =**

\$ 840.00

Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must  
also be filed (Note 37 CFR 1.9, 1.27, 1.28). \$

**SUBTOTAL =**

\$ 840.00

Processing fee of \$130.00 for furnishing the English translation later ☐ 20 ☐ 30  
than months from the earliest claimed priority date (37 CFR 1.492 (f)). \$

**TOTAL NATIONAL FEE =**

\$ 840.00

Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be  
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +

**TOTAL FEES ENCLOSED =**

\$ 840.00

Amount to be:	\$
refunded	
charged	\$

- a. ☐ A check in the of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. 09-0470 in the amount of \$ 840.00 to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any  
overpayment to Deposit Account No. 09-0470. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b))  
must be filed and granted to restore the applications to pending status.

SEND ALL CORRESPONDENCE TO:

Jay L. Chaskin  
GENERAL ELECTRIC COMPANY  
3135 Easton Turnpike - W3C  
Fairfield, Ct. 06431

Signature

Jay L. Chaskin

Name

24030

REGISTRATION NUMBER

Docket No. RD-25712

## UTILITY PATENT APPLICATION TRANSMITTAL

TO: Box PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, DC 20231

Transmitted herewith for filing under 35 USC 111(a) and 37 CFR 1.53(b) and 35 USC 371 is a new ☒ utility ☐ design patent application for an invention entitled:

## METHOD AND APPARATUS FOR PRODUCING DIRECTIONALLY SOLIDIFIED CASTINGS

and invented by: Vegeny Nikolaevich KABLOV, Viktor Vladimirovich GERASIMOV, Joseph Markovich DEMONIS, Viatcheslav Alexeevitch NIKOLAEV and Elena Mikhailovna VISIK

If a continuation application:

☒ continuation ☐ division ☐ continuation-in-part  
of prior application Serial No. PCT/US98/19021

Enclosed are:

1. ☒ Specification having eight (8) comprising the following:
  - a. ☒ Claims numbered from 1 to 14
  - b. ☒ Abstract of the Disclosure
  - c. ☒ Drawing (s) as follows:
    - (1) ☒ Formal ☐ Informal
    - (2) Number of Sheets – two (2) with Figures No. 1 to 2
  - d. ☒ Oath or Declaration as follows:
    - (1) ☐ Original and signed
    - (2) ☒ Unsigned
    - (3) ☐ Copy from prior application Serial No. filed
    - (4) ☒ With Power of Attorney
    - (5) ☐ Without Power of Attorney
2. ☐ Incorporation by Reference (if Box 1d(3) is checked)
3. ☐ Assignment
  - ☐ Recordation Cover Sheet
  - ☐ Document

4. ☒ Preliminary Amendment  
 5. ☒ Acknowledgment Postcard  
 6. ☒ Certificate of Mailing by "Express Mail"

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 as Express Mail No. EJ870850479US on June 1, 1999 and is addressed to the Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Dolores K. Tillson  
 (Name and Date) Dolores K. Tillson, June 1, 1999

7. ☒ Filing fee calculated and transmitted:  
 a. ☐ as described below for the claims as filed

For	No. Filed	No. Extra	Small Entity		Large Entity	
			Rate	Fee	Rate	Fee
Basic				\$ 380		\$ 760
Total Claims	14 - 20 =	-0-	x \$ 9 =	\$	x \$ 18 =	\$
Ind. Claims	2 - 3 =	-0-	x \$ 39 =	\$	x \$ 78 =	\$
Mult. Dep. <input type="checkbox"/>			+\$130 =	\$	+ \$260 =	\$
<b>Total Filing Fee</b>				\$		\$ 760

- b. ☒ see attached PTO-1398 for Transmittal Letter to US Designated/Elected Office for National Stage of PCT
- c. ☐ design filing fee
- d. ☐ The Commissioner is hereby authorized to charge and credit Deposit Account No. 09-0470 as described below. A duplicate copy of this sheet is enclosed.
- (1) ☐ Charge the amount of ☐ \$310.00 ☐ \$760.00 as filing fee.
- (2) ☐ Credit any overpayment.
- (3) ☐ Charge any additional filing fees required under 37 CFR 1.16 and 1.17.
- (4) ☐ Charge the Issue Fee set in 37 CFR 1.18 at the mailing of the Notice of Allowance, pursuant to 37 CFR 1.311(b).
- d. ☐ A check in the amount of \$ to cover the filing fee is enclosed.

8. ☒ Information Disclosure Statement  
a. ☒ PTO-1449  
b. ☒ Copies of Cited Documents
9. ☐ Certified Copy of Priority Document  
Country  
Filing Date  
Application No.  
Applicant
10. ☐ Verified Statement to establish Small Entity status under 37 CFR 1.9 and 37 CFR 1.27
11. ☐ Additional Enclosures as follows:  
a. ☐  
b. ☐

Date: June 4, 1999

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Jay L. Chaskin  
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